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ORIGINAL ARTICLE



Filipino therapists' experiences and attitudes of interprofessional education and collaboration: A cross-sectional survey

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ABSTRACT

For the past more than 50 years, the World Health Organisation has acknowledged through empirical findings that health workers that learn together work together effectively to provide the best care for their patients. This study aimed to: (1) describe the perceived extent of interprofessional education (IPE) experience among Filipino occupational therapists (OTs), physical therapists (PTs), and speech-language-pathologists (SLPs); (2) identify their attitudes towards interprofessional collaboration (IPC); and (3) compare their attitudes towards IPC according to: prior IPE experience, classification of IPE experience, profession, years of practice, and practice setting. Using a cross-sectional survey design, a two-part questionnaire was sent to Filipino OTs, PTs, and SLPs working in the Philippines via an online survey application. The first part of the survey contained eight items of demographic information and the second part contained the 14-item Attitudes Towards Health Care Teams Scale (ATHCTS). Findings revealed that among the Filipino OT, PT and SLP respondents ($n = 189$), 70.9% had prior experience on IPE. Moreover, the three most commonly used IPE teaching-learning strategies were case discussion (clinical setting), small group discussion, didactics, and case discussion (community setting), while the use of didactics and case discussion (community setting) yielded more agreeable attitudes towards IPC. Among the 14 items in the ATHCTS, 11 were rated with agreeability and three items with neutrality. For professional variables, only the practice setting variable yielded a statistically significant finding confirming those working in the academia to be more agreeable towards IPC compared to other settings. However, years of practice and professional background variables both yielded no statistically significant difference implying no association between years of practice and attitude towards IPC and a homogenous composition among respondents, respectively. The results of this research are to springboard IPE initiatives within Philippine higher education institutions to enable evidence-based IPC approaches in clinical practice.

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Introduction

The past decades mark the exponential increase in the human population leading to more complex health issues that require more specialized interventions and health professionals. In 2013, the World Health Organisation (WHO) identified that 7.2 million health workers are needed to attain the health-related Millennium Development Goals (WHO, 2013a). To alleviate this global concern, the WHO considers interprofessional education (IPE) as a necessary step to produce a “collaborative practice-ready” health workforce who will respond to local health needs globally through interprofessional collaboration (IPC) (WHO, 2010). Given the numerous health professions that exist within the healthcare system, strategic mechanisms such as IPE and IPC must be carefully introduced within higher education to suit the needs of each profession's values, competencies, and practices (WHO, 2013b). These specific mechanisms that promote IPE and IPC include supportive management practices, identifying and supporting champions, changing the culture and attitudes of health workers, willingness to revise the existing curricula, and appropriate legislations that facilitate collaborative practice (WHO, 2010).

The Centre for Advancement in Interprofessional Education (CAIPE) defines IPE as an occurrence when students or members of two or more professions learn with, from, and about each other to improve collaboration and the quality of care delivery. On the other hand, IPC means working in partnership between professions and organisations with individuals, families, groups and communities (Barr & Low, 2013).

As a subset in the health workforce, the primary roles of OTs, PTs and SLPs are to provide comprehensive evaluations specifically on person, environment and activity factors, conduct client-centred interventions, and set rehabilitation and habilitation outcomes that will restore health and promote quality of life, respectively (Occupational Therapy Association of the Philippines (OTAP), 2003a; Philippine Physical Therapy Association (PPTA), 2015; Philippine Association of Speech Pathologists (PASP), 2015). Based on the 2015 census, the Philippines has already produced approximately 27,000 licensed PTs, 3,000 licensed OTs, and 400 certified SLPs. Most of them practice in hospitals, private therapy clinics, academic institutions, community-based rehabilitation facilities, schools and home healthcare settings. The three professions work together in various practice settings using different

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teamwork approaches (multiprofessional, interprofessional, and transprofessional) to facilitate habilitation and rehabilitation to clients and communities (Barr, Koppel, Reeves, Hammick, & Freeth, 2005; Cohn, 2009; Reeves, Lewin, Espin, & Zwarenstein, 2010).

A local study by Aguila and colleagues (2009) ascertained the high perception of Filipino PTs towards collaboration with physicians, while another study by Opina-Tan (2013) introduced the principles of IPE and IPC during a pilot community-based training among OT, PT, SLP, nursing, and medical students from the University of the Philippines Manila. Given the collaborative nature of rehabilitation sciences, it is the responsibility of higher education institutions to prepare OT, PT and SLP students to be collaborative practice-ready in terms of knowledge, skills and attitudes before they immerse into actual rehabilitation practice.

The establishment of IPE and IPC in countries like Australia, Canada, United Kingdom, and the United States since the 1970s gave rise to the on-going global efforts in practicing IPE and IPC in other developed and developing countries (Oandasan et al., 2004). To monitor the growth of IPE and IPC globally, an environmental scan was conducted by Rodger, Hoffman, and WHO Study Group on Interprofessional Education and Collaborative Practice (2010) and identified a total of 41 countries implementing IPE. Apparently, the Philippines was not included implying that IPE and IPC are vague concepts among Filipino health institutions. Moreover, the efforts in championing IPE and IPC principles within the health and education systems still seem to be lacking.

The differences in the attitudes and perceptions towards learning and working as a team make each profession unique in its own right. However, it is still possible that Filipino OTs, PTs and SLPs have an incidental (meaning by chance or of minor priority) rather than a deliberate attitude towards learning from, with, and about each other in light of targeting rehabilitation goals in various settings. Therefore, examining these differences could provide evidence to support, or not, the argument regarding the relevance and timeliness of IPE and IPC in Philippine rehabilitation science education and practice today.

The purpose of this study is to describe the perceived extent of IPE experience among Filipino OTs, PTs and SLPs, identify their attitudes towards IPC, and compare how their attitudes vary according to prior IPE experience, classification of their IPE experience, profession, years of practice and practice setting.

Methods

Research design

A cross-sectional survey design was used to obtain the demographic profile (profession, practice setting and years of professional practice) of Filipino OTs, PTs and SLPs and the general description of their IPE experience and attitudes towards IPC through the Attitudes Towards Health Care Teams Scale (ATHCTS) (Heinemann, Schmitt, & Farrell, 2002).

Study setting and sample

Respondents were licensed and certified OTs, PTs, and SLPs who are currently working in the Philippines. The internet-based survey method was deemed most appropriate to

obtain at least 200 completed survey forms from Filipino OTs, PTs, and SLPs in a span of 1 month (15 December 2015 to 15 January 2016).

A respondent-driven sampling (RDS) (Heckathorn, 1997) was used to gather respondents via the professional organisations' (Philippine Academy of Occupational Therapists, Philippine Association of Speech Pathologists, and Philippine Physical Therapy Association) social media, public relations committees, and electronic mail listings. Aside from being cost-effective and time-saving, the RDS method was used due to the constant departure of Filipino OTs, PTs and SLPs to work abroad resulting in the lack of updated association directories in spite of organisational efforts.

Data collection

The online survey was created through Survey Monkey®. A formal letter of permission, poster with survey's uniform resource locator (URL), and informed consent form (ICF) were sent via electronic mail to the professional organisations involved in the study. The URL was also posted through selected Facebook® groups, accounts, and private messaging.

The internet-based survey contained the ICF with detailed information and instructions about the two-part questionnaire. It was also stipulated that Filipinos who are qualified OTs, PTs and SLPs but employed outside the Philippines should not take part in the survey. At the end of this webpage, a box was provided to input the respondent's electronic mail address for future tracking and reference.

The first part of the survey contained seven items that sought to obtain the respondent's demographic information: gender; profession; years of practice; practice setting; prior IPE experience; manner of IPE provision; and general IPE experiences. The second part contained the ATHCTS, a 14-item questionnaire on a five-point scale. Among the 11 instruments reviewed that measure attitudes of professionals towards IPE and IPC (National Centre for Interprofessional Practice and Education Website, 2015), the ATHCTS was selected since it has been used to examine the effects of educational interventions for healthcare teams and to evaluate practice-based team training programs for clinicians (Heinemann, Schmitt, Farrell, & Brallier, 1999). The utility of the ATHCTS was deemed fit for the aims of this study.

Data analysis

All data from the online survey were encoded using Microsoft Excel 2010 installed in a password-protected portable computer owned by the researcher. All statistical analyses were performed using Stata IC version 13. *p*-values of less than 0.05 were considered significant.

The categorical data (sex, profession, years of practice, practice setting, prior experience in IPE, manner of IPE provision and IPE experience classification) obtained were analysed through frequency analyses and percentage distributions.

Responses on each item (in the ATHCTS) could be "strongly agree", "agree", "neutral", "disagree" or "strongly disagree" and were assigned numerical values of 5, 4, 3, 2 and 1, respectively. Because Items 2, 6 and 9 of the ATHCTS are negatively worded, they were reverse-coded prior to the

calculation of the over-all mean score (Attitude Index or AI) and statistical analyses (Heinemann et al., 2002). Moreover, it is important to note that the 14 items considered in this study were the combination of two out of three subscales (i.e., quality of care and process and cost of team care) from the original ATHCTS (Heinemann et al., 1999). However, for the purposes of this study, only the AI was considered to measure IPC.

The AI of all participants were subjected to the Shapiro–Wilk test for normality. Since the data obtained did not follow a normal distribution, median and interquartile range (IQR) were computed to describe the over-all Attitude Indices of the participants. Hence, the Mann–Whitney U test was used to compare the AI between groups (prior experience in IPE, manner of IPE provision, and IPE experience classification) while Kruskal–Wallis test was used to compare the AI among groups (profession, years of practice, practice setting).

Ethical considerations

This study was approved with a reference code UPMREB 2015-431-01 by the University of the Philippines Manila Research Ethics Boards (UPM-REB), National Institutes of Health.

Results

Demographic profile

There was a total of 189 respondents (11 respondents short of the minimum target in the study, $n = 200$), 71 (37.6%) of which are males and 118 (62.4%) are females. In terms of professional background, there were 100 (52.9%) occupational therapists (OT), 56 (29.6%) physical therapists (PT) and 33 (17.5%) speech-language pathologists (SLP) who answered the survey.

IPE experiences

Based on the survey, there were 134 (70.9%) respondents who had prior IPE experience during their undergraduate years, clinical training, or continuing professional education. Specifically, there were 74 out of 100 (74.0%) OTs, 31 out of 56 (55.4%) PTs, and 29 out of 33 (87.9%) SLPs with prior IPE experience.

Among the 134 respondents with prior IPE experience, 94 (70.2%) said that IPE provision was mandatory, 38 (28.4%) voluntary (elective), and 2 (1.5%) with no specifications. These results show that almost three-quarters of Filipino OTs, PTs and SLPs received a mandatory IPE experience.

Furthermore, IPE experience was classified into eight teaching-learning (TL) strategies used for IPE delivery as indicated in the survey (see Table 1). A total of 106 respondents experienced IPE through case discussions in the clinical setting making it the most frequently used IPE TL strategy, while the least frequently used was online learning ($n = 12$). Among the professions, the three most

commonly used IPE TL strategies were (by frequency): 1) case discussion (clinical setting), 2) small group discussion and 3) lecture or didactics.

Attitudes towards IPC

This study used the version of the Attitudes Towards Health Care Teams Scale (ATHCTS) with 14 items to measure the attitudes of Filipino OTs, PTs and SLPs towards healthcare teams or IPC. The mean scores for each item in the ATHCTS were computed. Each item in the ATHCTS was given a mean score which was translated to a particular response category using the following assigned conversions: 1.00–1.49 = Strongly Disagree (SD), 1.5–2.49 = Disagree (D), 2.5–3.49 = Neutral (N), 3.5–4.49 = Agree (A), and 4.5–5.0 = Strongly Agree (SA). Based on Table 2, three (3) out of 14 items were perceived with neutrality (N) by Filipino OTs, PTs and SLPs, while the remaining 11 items were perceived with general agreement (A). The three (3) items that yielded neutral scores were: Item 2: “Developing an interprofessional patient/client care plan is excessively time consuming.”; Item 6: “Working in an interprofessional manner unnecessarily complicates things most of the time.”; and Item 9: “In most instances, the time required for interprofessional consultations could be better spent in other ways.”

Apparently, these items were also determined to be negatively-worded, meaning the scoring for these items were reversed. Moreover, there were SA and D responses on certain items by individual professions, but not as a whole. For instance, PTs showed SA on Items 4 and 12, and both PTs and SLPs on Items 3, 8 and 14. On the other hand, SLPs revealed disagreement (D) on Item 9.

The Attitude Index (AI) of all respondents showed a median of 4.0 and an interquartile range (IQR) of 0.6 for all the 188 respondents (one respondent was dropped for missing AI data).

Prior IPE experiences and attitudes towards IPC

The Mann–Whitney U statistic revealed that there was a significant difference in AI between those with and without prior IPE experience ($U = 2,732.50$, $p = 0.01$). Table 3 shows that those with prior IPE experience can lead to a more agreeable attitude towards IPC compared to those without.

Classification of IPE experience and attitudes towards IPC

The same test was utilized to determine whether there was any statistically significant difference in the AI and manner of IPE provision ($U = 2,732.50$, $p = 0.80$). Table 4 shows that the manner of IPE provision (mandatory or voluntary) had no effect on the attitudes towards IPC.

Moreover, the eight TL strategies used for IPE delivery (as listed in Table 1) were also examined individually to determine if a particular strategy would yield a statistically significant difference when compared to the AI. After running the Mann–Whitney U statistic, the use of lecture ($U = 2,732.50$, $p = 0.01$) and community-based rehabilitation (CBR) case studies ($U = 2,732.50$, $p = 0.01$) revealed to have statistically

Table 1. Frequency of teaching-learning strategies used for IPE delivery across professions.

Teaching-learning strategies used for IPE Delivery	Professional background			Total (n = 134)
	OT (n = 74)	PT (n = 31)	SLP (n = 29)	
1. Lecture/didactics	53 (71.6%)	20 (64.5%)	24 (82.8%)	97 (72.4%)
2. Small Group discussion	56 (75.7%)	20 (64.5%)	24 (82.8%)	100 (74.6%)
3. Case discussion (Hospital)	37 (50.0%)	16 (51.6%)	13 (44.8%)	66 (49.3%)
4. Case Discussion (Clinic)	58 (78.4%)	21 (67.7%)	27 (93.1%)	106 (79.1%)
5. Case Discussion (Community)	36 (48.7%)	18 (58.1%)	20 (69.0%)	74 (55.2%)
6. Apprenticeship /Mentoring	30 (40.5%)	12 (38.7%)	8 (27.6%)	50 (37.3%)
7. Simulated Patients	27 (36.5%)	14 (45.2%)	10 (34.5%)	51 (38.1%)
8. Online	7 (9.5%)	3 (9.7%)	2 (6.9%)	12 (9.0%)

Table 2. Mean score and response category per item in the 14-item ATHCTS (n = 188).

14-Item ATHCTS	Mean			Overall
	OT (n = 100)	PT (n = 56)	SLP (n = 33)	
1. Patients/clients receiving interprofessional care are more likely than others to be treated as whole persons.	4.1 (A)	4.3 (A)	4.0 (A)	4.1 (A)
2. Developing an interprofessional patient/client care plan is excessively time consuming.	3.0 (N)	2.8 (N)	3.3 (N)	3.0 (N)
3. The give and take among team members helps them make better patient/client care decisions.	4.4 (A)	4.5 (SA)	4.5 (SA)	4.5 (SA)
4. The interprofessional approach makes the delivery of care more efficient.	4.3 (A)	4.5 (SA)	4.5 (A)	4.4 (A)
5. Developing a patient/client care plan with other team members avoids errors in delivering care.	3.9 (A)	3.9 (A)	3.9 (A)	3.9 (A)
6. Working in an interprofessional manner unnecessarily complicates things most of the time.	2.8 (N)	2.7 (N)	2.6 (N)	2.7 (N)
7. Working in an interprofessional environment keeps most health professionals enthusiastic and interested in their jobs.	3.8 (A)	4.0 (A)	3.9 (A)	3.9 (A)
8. The interprofessional approach improves the quality of care to patients/clients.	4.4 (A)	4.5 (SA)	4.5 (SA)	4.5 (SA)
9. In most instances, the time required for interprofessional consultations could be better spent in other ways.	2.6 (N)	2.6 (N)	2.2 (D)	2.5 (N)
10. Health professionals working as teams are more responsive than others to the emotional and financial needs of patients/clients.	3.8 (A)	4.0 (A)	3.8 (A)	3.9 (A)
11. The interprofessional approach permits health professionals to meet the needs of family caregivers as well as patients.	4.1 (A)	4.3 (A)	4.3 (A)	4.2 (A)
12. Having to report observations to a team helps team members better understand the work of other health professionals.	4.4 (A)	4.5 (SA)	4.4 (A)	4.5 (SA)
13. Hospital patients who receive interprofessional team care are better prepared for discharge than other patients.	3.9 (A)	4.1 (A)	3.7 (A)	4.0 (A)
14. Team meetings foster communication among team members from different professions or disciplines.	4.4 (A)	4.5 (SA)	4.5 (SA)	4.5 (SA)

Table 3. Comparison of prior IPE experience and attitude index.

IPE Experience	Median	IQR	p-Value ^M
With prior IPE experience (n = 134)	4.1	0.6	0.01*
No prior IPE experience (n = 55)	3.9	0.6	

Note: IQR: interquartile range; M: Mann–Whitney U Test; *Significant up to $p < 0.05$.

Table 4. Comparison of manner of IPE experience provision and attitude index.

Manner of IPE Experience Provision	Median	IQR	p-Value ^M
Mandatory (n = 94)	4.0	0.6	0.80
Voluntary (n = 38 ¹)	4.1	0.6	

Note: IQR: interquartile range; M: Mann–Whitney U Test

¹A total of 134 respondents had prior IPE experience. However, two respondents did not directly answer if they had a mandatory or voluntary experience, rather one respondent indicated having had an IPE experience during a formal training abroad, and another respondent had an IPE experience only during clinical practice. Hence, the sum of the respondents analysed in Table 4 is only 132.

significant difference. This means that those who had prior experience in IPE through the delivery of these two TL strategies had more agreeable attitudes towards healthcare teams and IPC compared to those who did not.

Professional factors and attitudes towards IPC

This study also examined if there is a relationship between professional factors (i.e., profession, years of practice, and practice setting) and the AI of Filipino OTs, PTs, and SLPs. Using the Kruskal–Wallis test, only the practice setting variable was found to be statistically significant with a p -value of 0.02. Table 5 shows the summary of medians based on profession and practice setting.

In terms of years of practice ($p = 0.06$), those who have been practicing for seven or more years obtained the highest median of 4.2, followed by those who have been practicing for less than a year (4.1), four to 6 years (4.0), and one to 3 years (3.9) (see Figure 1).

Discussion

The survey conducted revealed that almost three-quarters of the respondents had prior IPE experience which were provided in either mandatory or voluntary manner. This evidence can ensure a place for the Philippines in the future mapping of countries utilising IPE as a strategy to address the shortage of health workers globally.

Table 5. Summary of medians based on profession and practice setting.

Professional Variable	Median	IQR	<i>p</i> -value ^{KW}
Profession (ranked)			0.07
Physical therapy (<i>n</i> = 56)	4.3	0.6	
Occupational therapy (<i>n</i> = 100)	3.9	0.5	
Speech-language pathology (<i>n</i> = 33)	3.9	0.6	
Practice Setting (ranked)			0.02*
Academia (<i>n</i> = 23)	4.3	0.4	
Home healthcare (<i>n</i> = 11)	4.2	0.6	
Community-based /School-based (<i>n</i> = 10)	4.1	0.3	
Hospital (<i>n</i> = 32)	3.9	0.5	
Private clinic (<i>n</i> = 113)	3.9	0.6	

Note: IQR: interquartile range; KW: Kruskal–Wallis Test; *Significant up $p < 0.05$.

This study also identified that case discussion (clinical setting), small group discussion (SGD), and didactics were the three most commonly used teaching–learning (TL) strategies to facilitate IPE among the respondents. Additionally, it is worth noting that 93.7% of them experienced IPE through more than one TL strategy, which may imply the necessity to use multiple TL strategies during IPE in the classroom, laboratory, and practice settings to facilitate attitudinal development towards IPC.

The case discussion in the clinical setting involves presenting patient's clinical data and discussing differential diagnoses, evaluation results, and intervention plans among colleagues. The whole process is facilitated by both the clinical educator and student who exchange information and experiences (Atienza, 2010). Possibly, the case discussion experienced by the respondents happened during team-based case conferences throughout internship. The usage of this TL strategy allows other IPE opportunities such as reviewing referral information with a physician and considering referral directions to and from other health and non-health professionals. Moreover, a case discussion in the clinic is an avenue where professional socialisation among health profession students is honed as a competency. This competency involves teaching pre-registration students how different professionals are equal (i.e., that there is no gap or hierarchies) (Atienza, 2010) and exposed to the realities of inequality and blurring of roles among professions (Sana, 2000).

Although clinical case discussion was the most frequently used TL strategy for IPE facilitation, it had no association with developing attitudes towards IPC. This result suggests that clinical case discussion must be used along with other TL strategies (e.g., didactics and case discussion in CBR context) to maximise its potential of developing attitudes towards IPC.

The second most commonly used TL strategy for IPE among respondents was small group discussion (SGD). Practice cases are both provided in case discussion and SGD. In health professions education, the main difference lies in the learning environment since SGD is commonly facilitated during classroom sessions, while case discussion is meant to be facilitated during internship.

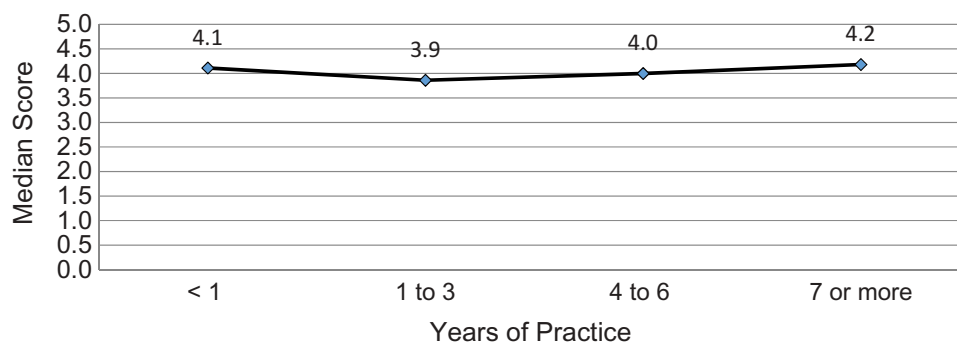
Alinea (2010) stated that SGD is specifically used to improve teamwork, higher-order thinking skills, communication skills, and collaborative learning. OT, PT and SLP programmes in the Philippines have almost 3–4 semesters of basic clinical sciences, 2–3 semesters of medical sciences, 3–4 semesters of professional courses, and 10 months of clinical internship or fieldwork. All these programs are presently undertaking a curricular revamp towards an outcomes-based education approach.

SGD also offers learners a less threatening atmosphere to discuss clinical cases and to be aware of self and others within the team (Alinea, 2010). Educators who use SGD would most likely provide practice clinical cases and small projects for their learners to zoom into specific issues and applications from the general theories discussed in class. Consequently, educators using SGD choose to evaluate learners as a group and would measure beyond their knowledge domain since an SGD would assess each learner's competencies on communication, collaboration and creativity.

A small group discussion cannot achieve its goals without the use of didactics. Using didactics is an efficient way to discuss key terms and ideas on IPE and IPC, to ask students questions and help them respond, and to present abstract frameworks, images of how IPE and IPC are conducted, and relevant statistics. Although considered less effective for teaching psychomotor skills and developing attitudes, didactics remain to be the first and most practical TL strategy to be used when introducing IPE to a large audience (Ogawara et al., 2010).

Didactics must facilitate active rather than passive learning because it is not one-sided, but interactive (e.g., Barr et al., 2005). The novelty of IPE and IPC as topics within health science programs in the Philippines may compel health profession and medical educators to choose didactics among other TL strategies when introducing them to a large group of learners for practical reasons.

Along with didactics, CBR case discussion was found to promote a more agreeable attitude towards IPC among Filipino OTs, PTs and SLPs. Didactics and CBR case discussion

**Figure 1.** Median scores of Filipino OTs, PTs and SLPs based on years of practice.

could be interpreted as initial and terminal IPE points, respectively, that effectively facilitate attitudes towards IPC.

Possibly, those who indicated CBR case discussion as part of their IPE experience may have had the opportunity to evaluate and provide interventions to clients with other health professionals in the community health unit or in client's homes. Mendoza (2010) stated that in CBR settings, it is crucial for health profession students to be aware of each other's role, improve communication skills, and foster an attitude of teamwork.

Filipino OTs, PTs and SLPs working in CBR settings would commence their service delivery by establishing rapport with the "barangay" (i.e., the smallest governmental unit in Philippine society). The initial contact between health professionals and the barangay would allow both parties to plan on a proposed community program and set mutual expectations. When health and rehabilitation-focused programs are approved, the barangay leader usually appoints barangay health workers (a set of designated volunteer who were informally trained by qualified health professionals on basic healthcare skills) to collaborate with qualified healthcare professionals in order to achieve their CBR goals. The collaboration even extends to the community residents through periodical home visits and community-wide seminars enabling them to set mutual goals towards community empowerment.

The discussion on the attitudes of Filipino OTs, PTs and SLPs towards IPC is divided into two parts: (1) five most agreeable items and (2) three neutral items. The five items with the highest AI scores revealed how Filipino OTs, PTs, and SLPs consider team meetings (item 14) as an avenue to foster two-way communication (item 3) and report observations and professional role to the team (item 12), which are essential to improve quality of care (item 8) and team efficiency (item 4).

The (strong) agreeability on Item 14 (Team meetings foster communication among team members from different professions or disciplines) implies that team meeting is an important ingredient in fostering communication among different professionals (Reeves, Perrier, Goldman, Freeth, & Zwarenstein, 2013; WHO, 2010). Team meetings in clinical practice occur regularly depending on the setting. In the Philippines, hospital team meetings take place daily or weekly to monitor the status of clients and administrative duties, while in the private clinics, team meetings are performed quarterly but rarely on a monthly basis due to time constraints and environmental barriers (differing venues, extra expenses, and policies).

The (strong) agreeability on Item 3 (The give and take among team members helps them make better patient/client care decisions) implies that during team meetings, respondents agree to have a two-way rather than a one-way communication process, which is similar to the suggested communication mechanism for IPE (WHO, 2010). This means that the respondents agree to share what one knows about the client and receive immediate feedback from team members during team meetings.

Team meetings become an avenue where flexibility or adaptability, team leadership, conflict resolution, feedback and closed-loop communication or information exchange can be demonstrated (e.g., Baker, Gustafson, Beaubien, Salas,

& Barach, 2005). In spite the agreeability of Filipino OTs, PTs, SLPs towards mutual communication, it remains to be an incidental (passively done) rather than a deliberate (actively done) practice across settings.

Health science programs in recent years have been making efforts to shift from medical-centred towards patient-centred approaches in healthcare, but the realities of inequality and blurring of roles among professions still dominate the Philippine healthcare system today (Sana, 2000). Up to date, Philippine legislation (Republic Act 5680: Philippine Physical and Occupational Therapy Law) still requires the prescription from a physician prior to the provision of OT and PT services (Senate and House of Representatives of the Philippines, 1969). Since 1969, this law has shaped the practice of Filipino OTs and PTs into a unidirectional relationship with physicians. Unfortunately, this unrevised law does not state how OTs and PTs can reciprocate physician's prescription and how collaboration can be performed among OTs, PTs and physicians.

The (strong) agreeability on Item 8 (The interprofessional approach improves the quality of care to patients/clients) suggests that Filipino OTs, PTs and SLPs perceive "interprofessional team approach" as favourable when they want to ensure quality as they provide healthcare delivery to their clients and the communities they serve. It is also important to note that even though 29.1% of the respondents indicated no prior IPE experience, their general agreement to this item may still have contributed to the relatively high over-all mean score it received.

Also, the (strong) agreeability on Item 12 (Having to report observations to a team helps team members better understand the work of other health professionals) indicates the importance of reporting client observations in a team. For professionals who cannot be physically present during team meetings, written and oral reports may be provided. However, during excused absences, written or soft copy reports are expected to be delivered in time for the team meeting. Today, using virtual communication (i.e., web conferencing) is seen to be an aide to promote IPC (Ho & Sharman, 2005; McCartney, Hooker, Cordeiro, Lauscher, & Ho, 2012). It is also important to take note that there is a necessity to include in reports the role of the professionals for the awareness of clients and team members.

Lastly, the agreeability on Item 4 (the interprofessional approach makes the delivery of care more efficient) suggests that Filipino OTs, PTs, and SLPs perceive an IPC approach to be utilised if they intend to achieve efficiency in the care delivery they provide. Although each practice setting has its own systems of making care delivery efficient, using an IPC approach may sustain and improve efficiency in their respective practice settings (Bajnok, Puddester, Macdonald, Archibald, & Kuhl, 2012; Makino et al., 2013).

The respondents may possibly have answered Items 2, 6 and 9 with neutrality out of consciousness with the code of ethics particularly on the principles of fairness (equality), dignity (respect for differences) and non-maleficence (avoiding conflict and harm) (OTAP, 2003b). Neutrality may have also occurred due to the scattered frequency distribution of responses in these items.

The neutrality on Item 2 (developing an interprofessional patient/client care plan is excessively time consuming) reveals

that Filipino OTs, PTs and SLPs may find an “interprofessional care plan” for a client or community to be either time-saving or time-consuming depending on the circumstance. For instance, when an “interprofessional care plan” is developed within a hospital and academic setting (i.e., university’s training clinic), it would be considered time-saving since all team members are present in a common place and time. In contrast, OTs, PTs, and SLPs working in home healthcare or private clinic settings may find developing an “interprofessional care plan” to be time-consuming since most likely they practice in different locations with conflicting work schedules.

Ideally, working with clients in rehabilitation requires constant collaboration, but in reality, they can only meet occasionally (or at least once a year) to sit down and discuss client problems, goals and plans. Team members who work in private clinics and home healthcare may find it demanding to set a common time for a meeting, commute or drive to the meeting place, and to spend out-of-pocket money to even make this interprofessional meeting possible. To resolve this issue, OTs, PTs, and SLPs working in these settings may utilise information and communication technology (ICT) systems (e.g., use of video conferences, phone calls, and online messaging applications) in order for interprofessional care plan formulation to be perceived as more time-saving than time-consuming (Curran et al., 2015).

The neutrality on Item 6 (Working in an interprofessional manner unnecessarily complicates things most of the time) suggests that the respondents may find “interprofessional working” as complicated depending on the circumstance. Although, in principle, OTs, PTs and SLPs would be expected to perform duties in accordance to the code of ethics and to perform quality care for clients, extraneous factors (i.e., traffic situations, public transportation, proximity, conflicting personal and professional schedules, and extra monetary expenses) may contribute to the difficulty of working interprofessionally. These extraneous factors are considered barriers to engage in IPE and IPC. Herewith, alternatives to these barriers may make IPE and IPC less complicated. For instance, when public transportation, proximity, and traffic situations hinder IPC, using ICT systems may be utilised (Ho & Sharman, 2005; Kuziemyky & Reeves, 2012). Moreover, conflicting personal and professional schedules can be addressed through personnel policies (providing compensation or reimbursement when attending interprofessional team meetings) and creation of incentives and opportunities for continuing professional development (Harvan, Royeen, & Jensen, 2009; World Health Organisation, 2010).

Item 9 (In most instances, the time required for interprofessional consultations could be better spent in other ways) and Item 2 contain constructs on the element of time. The neutrality on Item 9 implies that the respondents may find consultation hours with team members to either be a primary or secondary priority depending on the situation. Possibly, professionals who are given a set time within the day, week, or month to sit down with their team members to discuss a client’s case may consider “interprofessional consultation” to be a time well spent (WHO, 2010, pp. 27 & 30). Not to mention, this consultation time may also be paid on certain

practice settings, which can be considered a priority by professionals. Conversely, there may be professionals who would rather use this “interprofessional consultation” time for other matters. Those in the hospital setting may use it for direct patient care, administrative duties, or instruction of interns, while those in the private clinic and home healthcare settings may use it for direct patient care, documentation, and marketing of services. These “other matters” that professionals attend to are usually stipulated in their job descriptions, monitored, and given remuneration. IPC will be seen as a second priority when it is not expected within the practice setting.

Among the professional groups, PTs were considered to have the highest median on the ATHCTS compared to OTs and SLPs. This implies that PTs are more likely to attend team meetings and have the opportunity to engage in two-way communication processes with team members for a more efficient and improved quality of care provision. This interpretation can be supported by the data obtained in this study which reveals that a total of 62.5% of the PT respondents work in either hospital or academic settings, which were considered earlier to be settings where “interprofessional team meetings” are easier to organise. Indeed, having a built environment promotes and facilitates communication flow between professionals – a key action proposed by the WHO to promote IPE and IPC (WHO, 2010).

The non-significant result in AI scores across the professions may be due to the relatively homogenous composition among OT and SLP respondents. Interestingly, Filipino OTs and SLPs are primarily composed of graduates from six World Federation of Occupational Therapists (WFOT) accredited OT programs and two SLP programs in the country, respectively. Herewith, it can be presumed that the respondents may have been exposed to similar IPE experiences and developed attitudes towards IPC within similar cultures during pre-registration years. Similarly, most of the educators in these OT and SLP programs come from almost the same background. This limitation can actually be perceived as strength since these OTs and SLPs could have received a uniformly IPE experience and training, resulting in a more consistent attitudinal development towards IPC.

The average AI scores were found not to be statistically significant different ($p = 0.06$) across the years of professional practice bands. However, median scores revealed that respondents who have been in practice for seven or more years could have possibly developed a “collaborative attitude” which let them provide quality interprofessional care delivery. The result on this study contradicts studies that revealed how a group of professionals (OTs, PTs, Nurses, and Laboratory Scientists or Medical Technologists) developed a “less positive” attitude on IPC compared to undergraduates within the same profession (Makino et al., 2013). Likewise, a number of studies about students and residents in different health and social care professions with prior work and higher education experiences showed “less positive” attitudes towards IPE and IPC (Maharajan et al., 2017; Pollard, Miers, & Gilchrist, 2004; Tanaka & Yokode, 2005).

Interestingly, entry-level professionals have relatively high agreeable attitudes towards IPC as compared to those who

have been in the practice for between one and 6 years. This result may suggest how fresh graduates possess an idealistic view of how different professionals work within healthcare teams compared to those who are in the practice for longer periods. After obtaining their licenses, these entry-level professionals may only have encountered several cases and are mentored by senior professionals who are introducing them to the idyllic system of healthcare. Similarly, Makino and associates (2013) concluded that lesser exposure to the realities of the healthcare system and team collaboration yields more positive attitudes towards IPC, and vice-versa.

However, as years go by (i.e., after the first year of practice), the young professionals may begin to be more exposed to the realities of the healthcare system such as professional hierarchies, complexities of communication and collaboration, increasing workloads, scheduling constraints and proximity concerns. As new as they are in professional practice, they may find solving problems on collaboration difficult since they still lack experience and flexibility. These factors can be explained by the slight drop of median score from 4.1 to 3.9 for those with one to 3 years of experience. Then, it was noted that the median score slightly increased from 3.9 to 4.0 after some more years of practice (i.e., after the third year of professional practice). An explanation on this increase can be from the fact that added years of practice indicates added experiences in resolving conflicts on collaborative practice. Moreover, every successful resolution on certain conflicts on collaboration may have given the respondents more flexibility during collaborative conflicts, thereby developing a more agreeable attitude towards IPC as they advance in their professional careers.

This interpretation is based on the medians on the years of practice (with four bands) across the three professions rather than per profession. This is because the results of this study aims to provide evidence to design a formal IPE program for the use of rehabilitation professionals in general and not just a specific profession.

Among the professional factors, only the variable on practice setting yielded a statistically significant difference. Respondents working in the academia received the highest median score. This result can be due to academicians' inclination to a more idealistic view on IPE and IPC since they are more exposed to recent research in the field which is available to them through library access, journal subscriptions, and continuing education opportunities such as IPE trainings (Ogawara et al., 2010). It can also be presumed that academicians work within a common built environment which can enhance collaborative practice both in education and clinical practice (WHO, 2010). These factors may have contributed to the relatively more agreeable attitude on healthcare teams and IPC compared to the other groups. Findings in this study show similar results with the studies on the positive attitudes towards IPE and IPC among academicians from medical and nursing schools surveyed in Malaysia, Philippines, Japan, and Korea (Lee, Celletti, Makino, Matsui, & Watanabe, 2012; Makino et al., 2015).

The academic group was followed by those working in home healthcare settings, which mainly consisted of physical therapists ($n = 11$) who also received the highest median score in terms of attitudes towards IPC compared to OTs and SLPs. Although, the

home healthcare setting involves direct collaboration with clients and caregivers, PTs in this setting usually work closely and positively with physicians (Aguila et al., 2009). One competency in this setting is collaborating through verbal and written communication to discuss client's progress periodically.

Ten respondents work in community-based and school-based settings (i.e., 4 school-based OTs, 4 school-based SLPs and 2 community-based OTs) received a combined median score (4.1). In principle, both community-based and school-based rehabilitation professionals work with a variety of health and non-health professionals to achieve community and educational goals, respectively. For this study, only the OTs and SLPs were noted to work in these practice settings due to availability of positions and opportunities. The relatively agreeable score of this group may be a result of the expectation to work with other professionals before commencing the rehabilitation and habilitation processes.

Respondents who work in the hospital and private clinic settings received the lowest median score (3.9). In contrary, a systematic review revealed that seven out of 15 studies concluded that IPE had positive outcomes in hospital-based settings (Reeves, Zwarenstein, et al., 2010; Reeves et al., 2013). Although two or more professionals are present in these settings, hospitals and private clinics in the Philippines may still use a multiprofessional team approach (an approach where team members from different health and social care professions work parallel to one another rather than interactive), which is different from an interprofessional approach (an approach where team members share team identity and work closely together regularly to negotiate and agree on how to solve complex care problems) (Reeves, Lewin, et al., 2010; Orchard, King, Khalili, & Bezzina, 2012). Unfortunately, due to physical barriers (team members working in different venues), schedule constraints (team members cannot have common time to meet), and lack of communication lines (team members have no system of ensuring two-way communication between professionals), an interprofessional approach can easily be replaced by a multi-professional approach in practice settings.

The statistical significance found between the variable on practice setting and attitudes towards IPC may be due to the heterogeneous composition of the respondents in terms of their practice settings. Although IPE experiences and attitudinal development towards IPC may be gained within similar environments, practice settings vary widely depending on the institutional nature of the facility (government, non-government, or private). Likewise, practice settings vary based on the type of professionals working in the setting, the socioeconomic status of the clients they serve, and institutional policies. These extrinsic factors that vary from one practice setting to another thereby influence their differences in attitudes towards IPC.

With regard to limitations, this study is limited to respondents from the OT, PT, and SLP professions, hence the results of this study may only be applicable to the practice settings where these professionals commonly work in. The use of non-random sample and only two of the three ATHCTS sub-scales may also contribute to study findings. The analyses of IPE experience classifications were treated as independent when in reality many participants would have

experienced several, hence this is also a study limitation. Also, this study only aimed to measure the affective domain of IPC quantitatively.

Concluding comments

The results of the study revealed that OTs, PTs, and SLPs who have had IPE experiences yielded a more agreeable attitude towards IPC compared to those without. IPE in the Philippines has been provided on either a mandatory or voluntary basis and generally delivered through case discussions in both clinical and community settings, small-group discussions and didactics. Among these IPE teaching-learning strategies, didactics and case discussion in a community setting were found to yield a more agreeable attitude towards IPC among the respondents. This study provides evidence to support the existence of IPE in the Philippines.

In terms of attitudes towards IPC, the respondents consider team meetings as an avenue to foster two-way communication and report observations and professional role to the team, which are essential to improve quality of care and team efficiency. Moreover, the respondents show unbiased perceptions regarding how time is spent for team meetings and priorities in service delivery.

Findings on professional factors also suggest that only the practice setting variable was found to yield a more agreeable attitude towards IPC. This finding may be due to the wide variations embedded across the practice settings where Filipino OTs, PTs and SLPs work such as setting orientation, composition of professions, clientele and institutional policies. Those working in the academia were found to have more agreeable attitudes towards IPC perhaps due to their idealism and work logistics. Likewise, OTs and SLPs working in community-based and school-based settings see IPC positively due to the inherent demand for collaboration based on the service delivery model they adhere to. The years of practice and professional background were variables found to have no statistical significance and were presumably due to the homogeneous composition of the respondents in terms of similarity in educational background, IPE experiences and the manner of developing attitudes towards IPC.

Based on the significance and conclusions in this study, specific recommendations were formulated for higher education institutions, professional organisations, and researchers. In the future, a formal IPE training course for health profession learners should be developed that will utilise lectures, case studies, and small group discussions to ensure experiencing IPE and to facilitate attitude development towards IPC. In addition, clinical practice guidelines should be formulated that include competencies based on the ATHCTS results in this study. Lastly, future research is recommended by enforcing a similar methodology with samples from other health and non-health professionals, investigating the knowledge, skills and behavioural domains among Filipino OTs, PTs and SLPs towards IPC, and describing the quality of IPC among the three professional groups in relation to their years of practice experience.

Declaration of interest

The author reports no conflicts of interest and is responsible for the content and writing of the article.

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